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EXAMINER	
JARRETT, SCOTT L	
ART UNIT	PAPER NUMBER
3624	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/777,918	D'HERS ET AL.	
	Examiner	Art Unit	
	SCOTT L. JARRETT	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) *15-24 and 34-37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 25-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/22/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Non-Final Office Action is in response to Applicant's request for continued examination and amendments filed July 22, 2009. Applicant's amendment amended claims 1-14 and 25-30. Currently claims 1-37 are pending, claims 15-24 and 34-37 being previously withdrawn as being directed to a non-elected invention.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 22, 2009 has been entered.

Response to Amendment

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

Response to Arguments

4. Applicant's arguments with respect to claims 1-14 and 25-33 have been considered but are moot in view of the new ground(s) of rejection.

It is noted that the applicant did not challenge the officially cited facts in the previous office actions therefore those statements as presented are herein after prior art. Specifically it has been established that it was old and well known in the art at the time of the invention to use a plurality of aggregation functions including but not limited to those recited in claims 8-13, 19-24, 33 and 37.

Examiner thanks applicant for providing the Netz article titles OLAP Services: Semiadditive Measures and Inventory Snapshots (1999).

Title

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: System and Method for Aggregating a Measure over a Non-Additive Account Dimension.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 1 and 14, Claim 1 and 14 recite the limitation "evaluating **the** parent member" in Claims 1 and 14 respectively. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claims to read a parent member for the purposes of examination. Appropriate correction required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 14 and 26 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention as evidenced by at least the following reference Netz, OLAP Services: Semiadditive Measures and Inventory Snapshots (1999).

Regarding Claims 1, 14 and 26 Netz, teaches a system and method for aggregating a measure over a non-additive account dimension (e.g. time, account balances, inventory balances – see for example Applicant's disclosure – Paragraph 8) of a cube (multidimensional data; Paragraphs 2, 4; Page 2) comprising:

- a processor, memory, relational data source, analytical data service and a reporting client in communication with the processor (OLAP Services, Microsoft SQL Server 7.0 is a computer program product inherently run/executed on a computer system; Paragraph 1, Page 1);

- in a computing device (OLAP Services, Microsoft SQL Server 7.0):

- evaluating a parent member for a first/second accounts (Paragraphs 4-5, 8, Page 2) comprising a plurality of first members of the non-additive dimension (of a cube; e.g. time, account balances, inventory balances) by aggregating the fist members according to a first/second aggregation functions (sum, average, quantity, value,

average over time; etc.; “Average over Time", Page 3) wherein the first/second aggregation functions are different (Bullets 7-11, Page 3; “Opening and Closing Balances”, Page 4); and

- wherein the non-additive account dimension has a parent member that includes at least one child member selected from the first or second members (descendants; Paragraphs 2-4, Last Paragraph, Page 4).

Netz further teaches outputting the evaluated parent member to a user (i.e. providing account balance and/or inventory snapshots; Paragraph 1, Page 5).

An issue of public use or on sale activity has been raised in this application. In order for the examiner to properly consider patentability of the claimed invention under 35 U.S.C. 102(b), additional information regarding this issue is required as follows:

- Please provide the citation and a copy of each publication which any of the applicants authored or co-authored and which describe the disclosed subject matter of aggregating a measure over a non-additive or semi-additive dimension.
- Please provide the citation and a copy of each publication that any of the applicants relied upon to draft the claimed subject matter. For each publication, please provide a concise explanation of the reliance placed on that publication in distinguishing the claimed subject matter from the prior art.

- Please provide the names of any products or services that have incorporated the claimed subject matter. Specifically please provide documentation (help files, manuals, articles, presentations, training, etc.) which disclose Microsoft's OLAP Services as part of the Microsoft SQL Server 7.0 or any product version in use or for public sale prior to the submission of the instant application disclosing aggregating a measure over a non-additive or semi-additive dimension and/or aggregating measures comprising an account dimension.
- Please state the specific improvements of the claimed subject matter in claims the disclosed prior art and indicate the specific elements in the claimed subject matter that provide those improvements.

Applicant is reminded that failure to fully reply to this requirement for information will result in a holding of abandonment.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-14 and 25-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimball et al., The Data Warehouse Toolkit: The Complete Guide to Dimensional Modeling (2002) in view of Rauer et al., U.S. Patent No. 6,161,103.

Regarding Claims 1, 14 and 26 Kimball et al. teach a system and method for aggregating a measure over a non-additive account dimension (facts; Paragraph 3, Page 17; Bullet 3, Page 30; Last Two Paragraphs, Page 37; Paragraph 1, Page 38; Paragraph 1, Page 72; Figures 3.5, 9.2) of a cube (multidimensional data) comprising:

- in a computing device (i.e. Kimball teaches building a data warehouse for performing one or more evaluations):

- evaluating a parent member for a first/second accounts comprising a plurality of first members of the non-additive dimension (of a cube) by aggregating the fist members according to a first/second aggregation functions (.e.g. counts, averages) wherein the first/second aggregation functions are different (Last Two Paragraphs, Page 37; Paragraph 1, Page 38; Last 2 Paragraphs, Page 71; Paragraph 1, Page 72; Banking Case Study, Page 200); and

- wherein the non-additive account dimension has a parent member that includes at least one child member selected from the first or second members (Banking Case Study, Page 200, bank account snapshots – household comprises a plurality of members; Figures 8.3, 9.2).

Kimball et al. further teach outputting (e.g. printing, displaying) the evaluated parent member to a user (Paragraph 3, Page 17; Last Paragraph, Page 137).

Kimball et al. teach an analytical data service (data warehouse, database platform) and a relational data source (database; Paragraph 4, Page 17; Paragraph 1, Page 37; Paragraph 1, Page 179) and computing various values (Paragraph 2, Page 72; Paragraph 3, Page 73).

While Kimball implicitly teaches a processor, memory, relational data source, analytical data service and a reporting client in communication with the processor (i.e. utilizing a one or more software modules to build a data warehouse for performing one or more well known data analysis/modeling actions) Kimball is silent on the specific computing device elements utilized.

Rauer et al. teach a processor, memory, relational data source, analytical data service (Figure 1) and a reporting client (Figures 32, 34-36) in communication with the processor (Figure 1) in an analogous art of aggregating data (Abstract).

It would have been obvious to one skilled in the art at the time of the invention that the system and method as taught by Kimball et al. would have benefited from utilizing any of a plurality of well known computing device configurations including but not limited to the processor, memory, relational data source, analytical data service and a reporting client in view of the teachings of Rauer et al., since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding Claims 2 and 27 Kimball et al. teach a system and method further comprising receive input from a user to designate the measure as a semi-additive measure (Last 2 Paragraphs, Page 71; Last Paragraph, Page 192; Figure 3.3).

While receiving input from a user via an interface is old, very well known and widely practiced Kimball et al. does not expressly teach an interface is provided for receiving input from the user as recited in claims 2-14 and 26-33.

Rauer et al. teach providing a plurality of user interfaces for receiving input from users in defining aggregation functions and/or accounts (aggregate builder; Column 7, Lines 35-45; Column 8, Lines 50-58; Column 11, Lines 18-31; Figures 28, 30, 7-31) in an analogous art of aggregating data.

It would have been obvious to one skilled in the art at the time of the invention that the system and method for aggregating measures over a non-additive account dimension as taught by Kimball et al. would have benefited from providing an interface for receiving input from a user in view of the teachings of Rauer et al., since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding Claims 3 and 28 Kimball et al. teach a system and method comprising receiving input from a user to select an additive aggregation function with which to aggregate additive dimensions of the cube (Paragraph 4, Page 71; Last Paragraph, Page 137).

Regarding Claims 4-5 and 29-30 Kimball et al. teach a system and method further comprising receiving input from a user to pair non-additive dimension with a non-additive by account aggregation function as well as pair the first account with the first aggregation function (Last Two Paragraphs, Page 37; Paragraph 1, Page 38; Paragraph 1, Page 72; Banking Case Study, Page 200; Paragraph 4, Page 71; Last Paragraph, Page 137; Figure 9.2).

Regarding Claim 6 and 31 Kimball et al. teach a system and method further comprising receiving input from a user to pair the first account with the first aggregation function and pair the first account with a first account type, the first account type being associated with the first aggregation function (Last Paragraph, Page 203; Figure 7.3, G/L Organization Key; Figure 8.3 Organization Key; Figure 9.1, Account Key; Figure 9.2, Account Key, Branch Key, Product Key).

Regarding Claim 7 and 32 Kimball et al. teach a system and method further comprising receiving input from a user to pair the first account with one of an income, expense, flow, balance, asset, liability, statistical or missing account type (e.g. account balances, opening/closing balances, monthly summary; Last Paragraph, Page 203; Figures 9.2, 9.4).

Further regarding claims 5-7 and 31-32 it is noted that the type of data (account) or label applied to the data (account) merely represents non-functional descriptive material and are not functionally involved in the steps recited nor do they alter the recited structural elements. The recited method steps would be performed the same regardless of the specific data or label used to describe the data. Further, the structural elements remain the same regardless of the specific data or label used to describe the data. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see In re Gulack, 703 F.2d 1381, 1385, 217 USPQ

401,404 (Fed. Cir. 1983); In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.

Regarding Claims 8-13 and 33 Kimball et al. teach a system and method further comprising an interface to receive input from a user to pair the first account with an aggregation function wherein the aggregation function is at least one of the following: average of children (Last Two Paragraphs, Page 71; Paragraph 2, Page 72; Figure 9.4), first/last child aggregation, first/last non-empty child or null.

Kimball et al. does not expressly teach all of the aggregation functions as claimed.

Official notice is taken, as noted and unchallenged previously, that the aggregation functions claimed are old and well known to those skilled in the art of data analytics and/or modeling, as evidenced by at least the following references:

- Microsoft OLE DB for OLAP (1998) - Bullets 1-5, Page 76; Pages 79, 108, 110); and
- Netz, OLAP Services (1999) – Average Over Time, Page 3; Paragraph 2, Page 5 – IsEmpty, Last Non Empty Value

It would have been obvious to one skilled in the art at the time of the invention that the system and method of Kimball et al. would have benefited from utilizing any of a

plurality of well known aggregation functions including, but not limited, to those claimed, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Further regarding Claims 8-13 and 33 it is noted that the type of aggregation function utilized merely represents non- functional descriptive material and are not functionally involved in the steps recited nor do they alter the recited structural elements. The recited method steps would be performed the same regardless of the specific aggregation function utilized. Further, the structural elements remain the same regardless of the specific aggregation function utilized. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see In re Gulack, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.

Regarding Claim 25 Kimball et al. teach a system (computer readable storage medium having computer-executable instructions, when executed cause a computing device to perform the method steps) for aggregating a measure over a non-additive dimension of a cube comprising:

- a plurality of first user-selectable elements each associated with a respective account type (Last Two Paragraphs, Page 37; Paragraph 1, Page 38; Last 2 Paragraphs, Page 71; Paragraph 1, Page 72);

- receiving a user selection of at least two of the first user-selectable elements (Banking Case Study, Page 200);

- defining, based on the selected first user-selectable elements, first/second accounts comprising a plurality of first/second members of the non-additive dimension, the non-additive dimension having a parent member that includes at least one child member selected from the first/second members (Last Two Paragraphs, Page 37; Paragraph 1, Page 38; Last 2 Paragraphs, Page 71; Paragraph 1, Page 72; Banking Case Study, Page 200);

- a plurality of second user-selectable elements each associated with a non-additive aggregation function (Banking Case Study, Page 200);

- for each of the first/second accounts receiving a user selection of one of the second user-selectable elements (Banking Case Study, Page 200);

- associating the first/second accounts with the second-user selectable elements selected from the first/second accounts (Banking Case Study, Page 200); and

- evaluating the parent member by aggregating the first/second members according to the non-additive aggregation function associated with the first/second accounts respectively (Banking Case Study, Page 200).

Kimball et al. does not expressly teach providing an interface (first/second) for receiving user input as claimed.

Rauer et al. teach providing several interfaces (first/second, etc.) for receiving user input specifically providing a (first) interface comprising a plurality of first user-selectable elements each associated with a respective account (dataset) type (Figures 28, 30); and receiving a user selection of at least two of the (first) user-selectable elements Column 7, Lines 35-45; Column 8, Lines 50-58; Column 11, Lines 18-31; Figures 28, 30);

More generally Rauer et al. teach a system and method for analytically modeling data comprising (Figure 1, Elements 167, 170, 184; Figures 5, 27, 28; Figure 30, Element 3010):

- providing a first interface comprising a plurality of first user-selectable elements each associated with a respective account type (Figures 28, 30);

- receiving a user selection of at least two of the first user-selectable elements (Column 7, Lines 35-45; Column 8, Lines 50-58; Column 11, Lines 18-31; Figures 28, 30);

- defining first/second accounts based on the (first) user-selectable elements (Column 15, Lines 10-27; Column 16, Lines 60-68; Column 17, Lines 45-48);

- providing a second interface comprising a plurality of second user-selectable elements each associated with a non-additive aggregation function (aggregate builder;

Column 7, Lines 35-45; Column 8, Lines 50-58; Column 11, Lines 18-31; Figures 28, 30);

- for each of the first/second accounts receiving a user selection of one of the second user-selectable elements (Column 7, Lines 35-45; Column 8, Lines 50-58; Column 11, Lines 18-31; Column 29, Lines 19-26, 53-60; Figures 28, 30);

- associating the first/second accounts with the second-user selectable elements selected from the first/second accounts(Column 7, Lines 35-45; Column 8, Lines 50-58; Column 11, Lines 18-31; Figures 28, 30); and

- evaluating the parent member by aggregating the first/second members according to the non-additive aggregation function associated with the first/second accounts respectively (Column 15, Lines 10-27; Column 16, Lines 60-68; Column 17, Lines 45-48; Column 29, Lines 19-26, 53-60; Column 30, Lines 1-10; Figures 28, 32, 34, 35; Figures 32, 34-36).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for aggregating measures over a non-additive account dimension as taught by Kimball et al. would have benefited from providing an interface for receiving input from a user in view of the teachings of Rauer et al., since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SCOTT L. JARRETT whose telephone number is (571)272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley Bayat can be reached on (571) 272-6704. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott L Jarrett/
Primary Examiner, Art Unit 3624